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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,395

09/16/2004

A. John Speranza

03-023

5394

31661 7590 09/10/2007

PROTON ENERGY SYSTEM
10 TECHNOLOGY DRIVE
WALLINGFORD, CT 06492

EXAMINER

RAMILLANO, LORE JANET

ART UNIT

PAPER NUMBER

1743

MAIL DATE

DELIVERY MODE

09/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/711,395

Applicant(s)

SPERANZA ET AL.

Examiner

Lore Ramillano

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-31 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) 1-3, 19-27 and 33-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-13, 15-18 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 1 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. In Applicant's reply filed on 6/13/07, applicant amended claims 10-12 and 28-31 and cancelled claims 14 and 32. Claims 1-13, 15-31, and 33-43 are pending. Claims 1-3, 19-27, and 33-43 are withdrawn. Claims 10-13, 15-18, and 28-31 are under examination.

Response to Amendment

Claim Objections

2. Claims 1 and 16 are objected to because of the following informalities:

In claims 1 and 16, examiner recommends amending, "said generator" by inserting the term, "electrical" between "said" and "generator" to clarify that the purity monitor in claim 1 and the hydrogen purifier in claim 16 are coupled to the electrical generator. Appropriate corrections are required.

Prior art rejections

3. In light of applicant's amendments, the rejections over the prior art are withdrawn. New rejections follow.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 10-13, 15-18, and 28-31** are rejected under 35 U.S.C. 102(b) as being anticipated by Harada (US Pub. No. 2003/0141200).

In figures 9 and 13, Harada discloses a system for maintaining hydrogen purity in an electrical generator, the system comprising: a hydrogen generator (i.e. 201) having means for disassociating water into hydrogen and oxygen gas (i.e. PEM, [0101]); an electrical generator (i.e. 261) coupled to said hydrogen generator (i.e. 201) by a conduit (figure 13 shows conduit between 201 and 261); a vent line (i.e. vent line coupled to 259) having a first and second end, said first end being fluidly coupled to said electrical generator and said second end being fluidly coupled to the atmosphere (i.e. from 261 to 259); a valve (i.e. 258) coupled to said vent line (i.e. from 261 to 259); a purity monitor (i.e. 235) operably coupled to said generator (i.e. 261) and said valve (i.e. 258), said purity monitor including means for transmitting a signal to said valve (i.e. [0239]); and, a pressure transducer (i.e. 270) fluidly coupled to said conduit, said pressure transducer transmitting a signal to said hydrogen generator in response to the gas pressure in said electrical generator falling below a first threshold wherein said hydrogen generator produces hydrogen gas in response to said pressure transducer signal (i.e. [0225]-[0229]).

Harada further discloses the following: the valve operates to release hydrogen gas from said electrical generator to the atmosphere in response to a signal from said purity monitor (i.e. 258, [0201]); the hydrogen generator is configured to generate hydrogen gas at a second threshold pressure, said hydrogen generator producing hydrogen gas in response to a reduction in pressure in said electrical generator (i.e. 201, [0201]); the hydrogen generator is an electrochemical generator having at least one polymer electrode membrane (i.e. [0101]); a pressure monitor (i.e. 254); and a hydrogen purifier (i.e. 233) coupled to said generator (i.e. 261) and provides a signal to the valve when the purity of hydrogen gas in the electrical generator is less than 95% or 99% pure.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claims 10-13, 15-18, and 28-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brosnihan et al. ("Brosnihan," US 2003/0090164) in view of Harada.

Brosnihan disclose a system comprising an electrical generator (70); a valve (i.e. solenoid valve), which may be operated to release hydrogen cooling gas from the electrical generator in response to a signal from the purity monitor [0024]); a purity monitor (hydrogen gas purity monitoring module, 20, Figs. 2 and 3); a pressure monitor [0027]-[0028]; a hydrogen purifier (hydrogen gas purity monitoring module monitors hydrogen cooling gas to optimize purity levels, [0020]-[0021]); and a signal is provided by the purity monitor when the purity of the hydrogen gas is lowered [0020]-[0021].

Brosnihan does not specifically disclose having a hydrogen generator coupled to the electrical generator by a conduit and a pressure transducer fluidly coupled to the conduit. The disclosure of Harada is disclosed above.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Brosnihan's system by including a hydrogen generator and coupling it to the electrical generator, as shown in Harada, because it would be highly beneficial and more cost-efficient to incorporate a hydrogen generator as part of Brosnihan's modular system since such system already comprises a monitoring module to monitor the hydrogen purity and an electrical generator, which is coupled to the modular system.

In addition, it would have been obvious to a person of ordinary skill in the art to modify Brosnihan's system by having a pressure transducer fluidly coupled to the conduit, which is also coupled to the electrical generator and hydrogen generator because it would be desirable to have a pressure device that monitors the pressure inside the hydrogen generator to insure a regulated amount of fluid is flowing in and out of the hydrogen generator.

Response to Arguments

8. Applicant's arguments with respect to claims 10-13, 15-18 and 28-31 have been considered but are moot in view of the new ground(s) of rejection.

Withdrawn Claims

9. This application contains claims 1-3, 19-27, and 33-43 are drawn to an invention nonelected without traverse in the reply filed on 10/25/06. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lore Ramillano whose telephone number is (571) 272-7420. The examiner can normally be reached on Mon. to Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lore Ramillano
Examiner
Art Unit 1743


Jill Warden
Supervisory Patent Examiner
Technology Center 1700